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# Central–Local Relations in China During the Reform Era: The Economic and Institutional Dimensions

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**Summary** — Central–local relations are a core but problematic issue in China's reform process. The conventional wisdom is that the economic reforms have considerably weakened control by the central government over economic activities in the localities. Political implications are derived directly from these economic observations. The prevalent view is that the economic reforms have reduced the political control of the center and indeed have called into question the viability of China as a single political entity. This article disputes these views. It shows that economic decentralization has been accompanied by a strengthening of China's unitary political system. This has direct bearings on local economic conduct. Because of the political and institutional constraints, local officials surrender tax revenues to the central government and curb their inflationary investment demand. Copyright © 1996 Elsevier Science Ltd

## 1. INTRODUCTION

Central–local relations are a core but problematic issue in China's reform process, for both economic and political reasons. The conventional wisdom is that the economic reforms have considerably weakened control by the central government over economic activities in the localities.<sup>1</sup> The popular image is that local governments, acting on their own economic interests, pursue anti-regional trade and investment maximization policies, often to the detriment of the country's macroeconomic stability as a whole.<sup>2</sup> Political implications are derived directly from these economic observations. The prevalent view is that the economic reforms have reduced the political control of the center and indeed have called into question the viability of China as a single political entity.<sup>3</sup> Much of the current discussion delves into the economic aspects of central–local relations; the political aspects of central–local relations are treated either as an effect of economic relations or are simply ignored.

This treatment of politics is problematic. Politics has an independent effect on economic outcomes and in reforming centrally planned economies (CPEs) political or bureaucratic institutions constrain economic decisions even more stringently. This article examines central–local relations from both the economic and institutional perspectives. It shows that the economic and political relations between the center and its provinces have moved in opposite directions since the early 1980s. Unlike other large countries, China has an unitary political system and while the

country has been moving toward economic federalism, its unitary political features not only have remained but have been strengthened in a number of respects.

In this article, I take into account these countervailing institutional developments. The first part of the article sketches the changes in economic relations between the center and its provinces during the reform era. Then I proceed to review the institutional developments that have taken place during the reform era and present some evidence on the effects related to these developments. In the last part, I speculate about the policy implications of such economic and institutional developments, using taxation and investment controls as examples.

## 2. CENTRAL–LOCAL ECONOMIC RELATIONS

Under a traditional CPE, administrative control over enterprises and product planning are of great importance to determine the balance of economic control between the center and the provinces. Since the allocative role of the market is minimal, bureaucratic coordination relies critically on administrative means. Administrative control over enterprises determines the chains of command and sources of instructions for

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enterprise operations.<sup>4</sup> Product planning is a corollary of the way in which enterprise controls are assigned, as the responsibilities for making product allocations flow from the way administrative control is divided.

Enterprise control and product planning are less important in central-local relations today because the main thrust of the industrial reforms has shifted away from the previous continuous adjustments of central-local supervisory responsibilities to an effort to make Chinese enterprises truly economic institutions. The main components of this effort include profit-retention schemes, tax reforms, granting enterprise autonomy, and recently the corporatization of governance structure and limited privatization. As a result, the main area of central-local relations now involves organizing and financing investment activities, tax policies, bank credits, and interregional trade policies.

#### (a) Administrative control and product planning

The Chinese system divides enterprises according to their level of administrative supervision. Central ministries exercise responsibilities for personnel, finance, and product allocation over some enterprises, while local governments exercise the same over others. In reality, however, there is a considerable degree of overlapping of administrative control among the central and local authorities.<sup>5</sup> This overlapping control has given rise to much confusion and chaos in enterprise management; as a result, Chinese managers often complain about having too many "mothers-in-law" (Tang, 1983; Tidrick and Chen, 1987).

The size of the local sector in China is large compared with other CPEs and it was so long before the economic reforms of the 1980s. In the early 1980s, for example, the central government directly owned only 3% of the 83,000 enterprises (Wong, 1986, p. 585). In terms of industrial output, state-owned enterprises subordinate to the central ministries at that time only accounted for 9% of total industrial output for the state sector (He and Wang, 1984, p. 67). In contrast, in the former Soviet Union, all-union enterprises accounted for about 62% of industrial output in 1988.<sup>6</sup>

The first effort to reverse the administrative decentralization of the Cultural Revolution occurred in 1977 when the central government reclaimed control over most of the large enterprises in the energy and steel sectors. Since the 1980s there have been both centralizing and decentralizing shifts. During 1982-87, the Center established three nationwide corporations for the petrochemical industry, the automobile industry, and for nonferrous metals, recentralizing enterprises in these three sectors in the process. On the other hand, enterprises in machine-building, electronics, textiles, and metallurgy were given over to local governments.

The net impact was a moderate increase in the share of central industrial output; in 1985, the central government accounted for some 25% of industrial output (State Council and SPC, 1990, p. 489).

Decentralized administration also implies decentralized output planning. Under a normal CPE, the allocation of products is conceptually equivalent to production coordination (Granick, 1990, p. 72) and thus the level at which goods are allocated is indicative of the level at which the bureaucracy coordinates production activities. Table 1 presents the number of products under central coordination in China and in the former Soviet Union. The Soviet central bureaucracies were responsible for allocating a significantly larger number of goods as compared with their counterparts in China.

The degree of local control over product allocation in China is striking and it predates the industrial reforms of the early 1980s. This difference in Soviet and Chinese planning is often attributed to the difference in the levels of economic development. But there are considerable fluctuations over time which are not correlated with the direction of economic development. In the former Soviet Union, in 1966-68, the number of products under central allocation fell by 20%; in the Chinese case during 1957-59, the number fell almost by half. Both the direction of this reduction and its magnitude suggest that the scope of the central allocation of products is subject to policy discretion.<sup>7</sup>

During the reform era, marketization in goods allocation has gained at the expense of both the central and

Table 1. *Number of products under central allocation in the former Soviet Union and China.*

Year	By planning commissions		By producing ministries		Central bodies combined	
	China	FSU*	China	FSU*	China	FSU*
1950	8	-	0	-	8	-
1952	55	-	0	-	55	-
1953	112	-	115	-	227	-
1957	231	-	301	-	532	-
1959	67	-	218	-	285	-
1965	370	20,438	222	-	592	-
1966	326	21,544	253	0	579	21,655
1968	-	14,498	-	1,814	-	16,312
1972	49	-	168	-	217	-
1973	50	8,426	567	40,000	617	48,426
1978	53	-	636	-	689	-
1979	210	-	581	-	791	-
1982	256	-	581	-	791	-
1983	-	9,200	-	-	-	-
1985	23	-	-	-	-	-

Source: Granick (1990, p.73).

\* Former Soviet Union.

local governments. Even in the late 1970s, there were already national goods ordering conferences that were cross regional in nature, covering a wide range of products; the prices at which these products were transacted were negotiated among the buying or selling parties, subject to some central pricing guidelines (Eckstein, 1981). As a result of the reforms, a significant portion of capital goods is directly marketed. With respect to steel, 17.5% was directly marketed in 1987; for coal, 32.7% (SPC and SSB, 1992, p. 42).

### (b) *Investment planning*

The reformist leaders in the late 1970s inherited a decentralized investment system.<sup>8</sup> Investment control is defined in terms of review and approval authority and central government tinkers with their scope to expand or reduce its influences. In early 1990, the center lowered the provincial approval threshold from 30 million yuan to 10 million yuan as part of its austerity program. The approval system works on a negative principle, i.e., it grants power to the State Planning Commission (SPC) to reject investment projects it does not like, but it does not give it much power to design investment programs it favors. The weakness of the passive nature of the system arises when, due to price distortions and policy uncertainties, few projects in priority sectors, as defined by the SPC, are proposed (Singh, 1992). Investment control is also defined in terms of the administrative supervision over an investment project; an investment project is local to the extent that the supervisory agency in charge is a local government office. This is the conventional definition of local investment employed by the Chinese statistical agency to report on investment activities.

The approval measure shows a clear decline in the SPC-controlled investments; the supervisory measure gives a near even split between the central and local governments as of 1991. In terms of trend, the two measures are broadly consistent: central investment control has declined over the years. The SPC approval share has declined in a particularly drastic fashion. At

the beginning of the 1980s, SPC approval covered about 41% of the fixed-asset investment projects; by 1990, it decreased to 33%. The supervisory measure of investment control shows a more modest decline in the central share during the course of the 1980s. Investment control remains an important short-term macroeconomic policy tool. Central control has not declined continuously but has fluctuated largely in tune with the ebbs and flows of the macroeconomic policies in the 1980s. In general, when an austerity policy was in effect the share of central investment control tended to rise, such as in the years 1983, 1987, 1989, and 1990. Otherwise the share tended to decline from the levels of the previous years; the years 1982, 1985, and 1988 are the most noticeable examples.<sup>9</sup>

### (c) *The tax system*

The tax system, which is at the core of the central-local relations, is a complex issue. The following is not meant to be a discussion of the overall strength of the Chinese tax system<sup>10</sup>; instead, my purpose here is to present a broad outline of important revenue developments in the 1980s.

The budget figures as given in the Chinese statistical sources need to be adjusted in two ways. One is to make the Chinese budget conform with international definitions. The Chinese budget counts government debts as a revenue item, whereas it is a part of the deficit under the international definition. The adjustment, therefore, subtracts both domestic and foreign loans from the reported revenue and adds them to the central bank financing to derive the government deficit.<sup>11</sup> The other adjustment is to incorporate a portion of what the Chinese call "extrabudgetary" revenue into the budget. The difference between budgetary and extrabudgetary revenues is that the former are collected by the Ministry of Finance but the latter are collected by government departments as fees.

The extrabudgetary revenue consists of three components: tax supplements levied by the local tax bureaus, fees collected by the largely non-economic

Table 2. *Measures of local control over investment activities (%)*

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
<i>Approval</i>											
1) SPC	41	34	40	36	32	31	32	30	32	33	—
2) Non-SPC	59	66	60	64	68	69	68	70	68	67	—
<i>Supervision</i>											
1) Center	54.4	53.4	59.8	59.4	53.5	53.8	56.7	55.5	54.0	53.9	50.1
2) Locality	45.6	46.6	40.2	40.6	46.5	46.2	43.3	44.5	46.0	46.1	49.9

Sources: SPC and SSB (1992, p. 30); SSB (1987; 1989; 1993a).

units of government, and retained earnings shared between firms and their supervisory agencies. Because retained earnings are not broken down between firms and supervisory agencies, the portion included in my calculation of the budget only includes the first two items, which are clearly governmental. This can cause a downward bias in estimating the actual resources available to the government by the amount that belongs to the supervisory agencies.

There are two reasons to include the governmental portion of the extrabudgetary revenue in calculating the Chinese budget. One is that it has become an important financing source for the government. The extrabudgetary revenue finances road and building maintenance, education, and scientific research, etc. — the activities that would have been financed from the government budget. In 1991 extrabudgetary expenditures for education was about 15% of budgetary expenditures, as compared with 8% in 1979 (SSB, 1993 p. 224).<sup>12</sup> The other reason is that extrabudgetary expenditures have increasingly fallen into the orbit of the Ministry of Finance system. Since 1986, the State Council has centralized extrabudgetary management, by requiring the Ministry of Finance to set up special accounts for the funds and requiring the planning commissions to review the fund allocations (State Council, 1987). The Guangzhou tax bureau, for example, already managed about 40% of the extrabudgetary revenue by 1986 (Xu, 1988). In Figure 1, both

the adjusted and unadjusted consolidated revenues are presented; the numbers refer to their GNP shares.

The main difference between the adjusted and unadjusted revenues is the portion of the extrabudgetary revenue that is clearly governmental. A clear fiscal decline apparently began in 1988 when the government extended tax contracts to provinces in addition to Guangdong and Fujian, the two provinces that had adopted the contract system earlier. The tax contracts stipulated a fixed provincial turnover quota to the central government, which would reduce tax buoyancy when fully implemented. But, from Figure 1, the tax share of the GNP experienced a one-time decline in 1988 but otherwise has managed to hold steady.<sup>13</sup>

But has the revenue growth met expenditure needs? In Figure 2, two definitions of government deficit are presented. The unadjusted figures do not include the extrabudgetary deficits or surpluses, whereas the adjusted figures do. The unadjusted figures show a clear declining trend until 1985; the adjusted figures show a similar trend but in the form of reduction and then the disappearance of surplus in 1987. This is consistent with the observation made above that the 1988 tax reforms apparently resulted in a one-time revenue loss and in an increase in deficit. Because the adjusted deficits consist of both budgetary and extrabudgetary deficits, it is possible to pinpoint the main source of this increase in deficit. During this period, the extra-

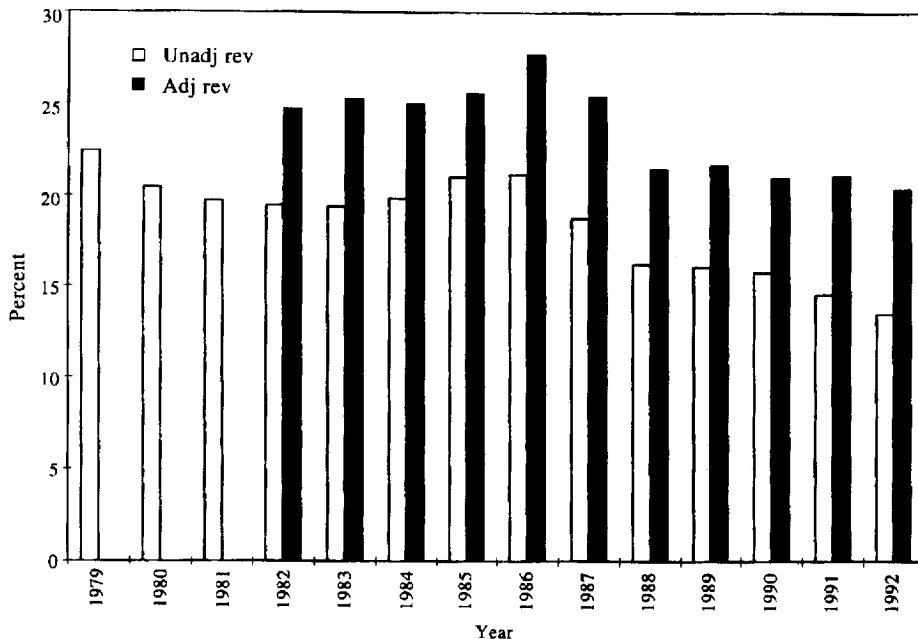


Figure 1. Adjusted and unadjusted consolidated revenues as shares of GNP. Source is based on figures published in SSB (1993b and 1993c).

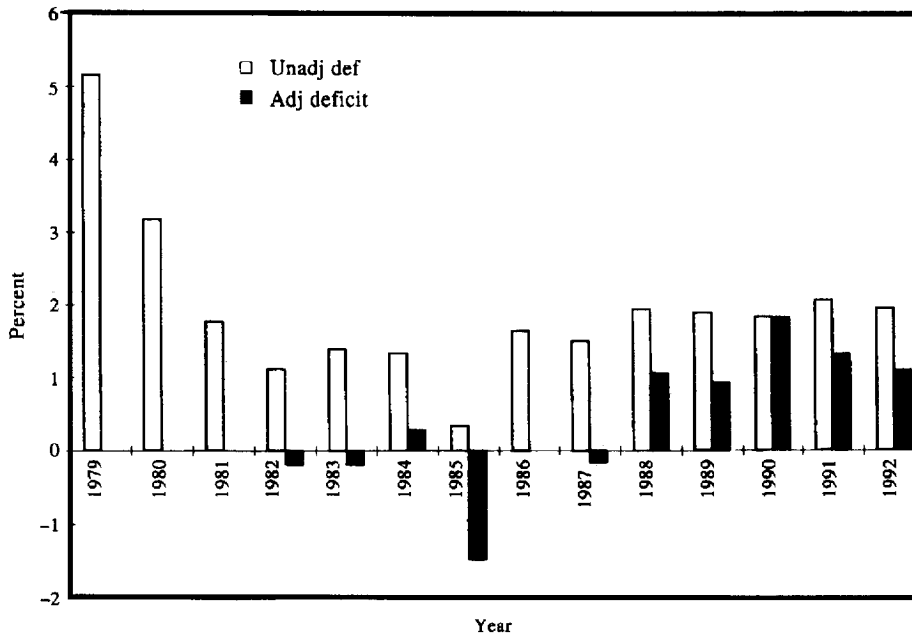


Figure 2. Adjusted and unadjusted deficits as shares of GNP. Source: based on Figures published by SSB (1993b and 1993c).

budget was in surplus and the worsening deficit situation thus resulted from the budgetary side.

Have the revenue positions of the central government deteriorated during the reform era? Figure 3 presents the shares of central and local revenues as percentage shares of GNP.<sup>14</sup> The first noteworthy aspect is that although the consolidated revenue is comparable to other developing countries, the share of central revenue in China is clearly smaller. The peak was in 1986 when the central revenue share was about 9.6%; in 1992, it stood at 6%. In contrast, in Japan, the central revenue share was about 14% and for India, 15% in the late 1980s. Another aspect is that the Chinese tax system in the early 1980s was much more decentralized than it was in the early 1990s. Over time, as shown here, the gap between the two bars has actually become smaller. This directly contradicts the widely held opinion that the reforms have worsened the central revenue position, although the central budgetary gains have not been steady.

#### (d) *Interregional trade policies and credit controls*

As the role of market has increased in resource allocation, interregional trade policies are more important to regulate economic activities. One such policy is the interregional trade flows. During the reform period interprovincial trade has declined somewhat, at least as far as trade conducted through state channels is concerned. For example, the percentage of total consumer

imports originating from other provinces declined from 38% in 1979 to 29% in 1986. In some provinces, this reduction has been quite drastic. Inner Mongolia imported 100% of its consumer goods in 1979, but only 22% in 1986 (World Bank, 1990a, pp 209–211).

The most immediate reason for this decline is “industrial convergence” — provinces have developed similar industrial structures in favor of the manufacturing sector.<sup>15</sup> This keen interest in the manufacturing sector is a result of fiscal incentives and of price distortions that favor manufactured goods.<sup>16</sup> Industrial convergence is a structural barrier to interregional trade because the comparative advantages of trade are reduced among provinces with similar economic structures. The second reason for declining interregional trade has to do with the anti-trade policies of the provincial governments. Marketing departments issue instructions not to import from or export to other provinces or, as trade increasingly takes place outside the state marketing channels, localities impose costly tariffs on traded commodities. Local governments have established “checkpoints” on the trade routes: one study documents 19 such checkpoints between Shishi, a city in Fujian province, and Shenzhen in Guangdong province (Li, 1989).

Bank lendings have become one of the most important policy instruments and expansion of banks’ financing role also has an impact on central–local relations, albeit less directly than changes in taxes. In typical CPEs, bank lending strictly complements production plans and banks act as a “cashier” for the

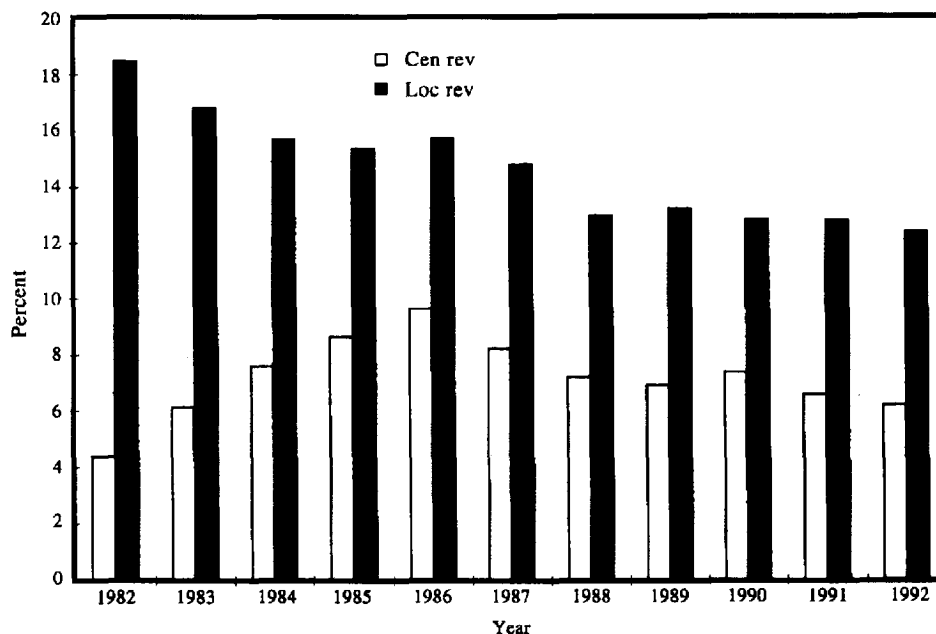


Figure 3. Adjusted central and local revenues as shares of GNP. Source: based on figures published by SSB (1993b and 1993c).

government's development programs. Banks also perform a monitoring role to check on wage and investment spendings of enterprises; this is because banks have access to data regarding almost all economic activities.<sup>17</sup> The financial reforms have aimed at transforming a "monobanking" system into a system that permits some degree of independence on the part of commercial banks, diversity in lending institutions, and more operational autonomy to banks. During 1979–84 regulatory and lending operations were separated: the People's Bank of China (PBC) extricated itself from lending operations; commercial lendings were turned over to a group of specialized banks. A number of nonbanking financial institutions have emerged as important actors in financial mobilization, the most prominent of which is the China International Trust and Investment Corporation (CITIC). Local governments also set up their own trust and investment companies (TICs) that have played some role in project financing. The development of the TICs has been particularly rapid since 1988; in the first six months of 1988 alone, the total number of TICs increased from 563 to 745. The emergence of the TICs has weakened the traditional method of credit control. Between January and August 1988, the loans outstanding at the TICs were 2.4 times their allotted quotas (Tang, 1992, p. 74).

In order to make banks operate as profit-maximizing enterprises, lending rates in 1979 were raised to reflect better the true costs of capital and an interest charge was levied on capital construction and working

capital loans. In addition limited autonomy was given to banks to decide on credit allocation and bank branches were authorized to charge rates within 20% of the published rates given by the PBC. Banks were also encouraged to explore new ways of mobilizing savings and to determine the level of lending on the basis of the level of their savings mobilization. The PBC credited the accounts of the specialized banks with less than sufficient funds to cover their planned expenditures; banks were thus forced to raise funds on their own. This was the policy of "more deposits, more loans."<sup>18</sup>

The effect on central–local relations from these financial reforms is subtle and indirect. First, to the extent that financial reforms have succeeded in converting banks from passive to active financing institutions, local governments have a previously unavailable new financing facility under their wings. Local governments can powerfully affect the administration of bank lendings as they have a say over the appointment of the regional directors of the PBC, some of whom also serve concurrent posts in the local governments and all of whom are members of the local party committees. Apart from these formal controls, the local governments retain intangible influences that banks ignore only at their own peril. For example, the supply of water and electricity, housing, recruitment of bank employees, schooling of their children, etc. potentially all are under the influence of the local governments (Fu and Xu, 1988; Zhou, 1988).

Second, the corporatization of banks enhances the profit motives of lending operations. The immediate effect is that banks' economic interests converge with those of the local governments: Both want to develop industries with high accounting profits. Banks thus have developmental urges similar to those of the local industrial bureaus; this convergence of incentives means that it is harder for the central government to use the banks to achieve its industrial policy goals. Third, although the formal power over credit creation rests with the headquarters of the PBC (and ultimately with the State Council), the operational autonomy granted to the local bank branches attenuates this central power. Bank branches are motivated to create credits on their own, by converting loans into deposits (Bowles and White, 1993, 89).

The greater leeway of the specialized banks to determine the sectoral composition of the loan portfolio also translates into higher credit demand. Until the 1993 reform efforts, the specialized banks undertook lendings to profit-oriented commercial projects as well as to low-profit policy projects.<sup>19</sup> The higher returns motivate banks to allocate their own funds for commercial lendings, while leaving the PBC to pick up the tab for policy lendings. Credit plans for state priority items often are underachieved while credit plans for nonpriority items are overachieved.<sup>20</sup> Banks also underfund those projects that have a "rigid" demand schedule — e.g., produce will rot if not purchased and stored promptly. Between January and August 1988, the ABC made loans about 48% in excess of its quota and then demanded additional credits from the PBC during the fall procurement of agricultural produce (Tang, 1992). The issuance of "IOUs" to farmers is a direct consequence of the strategic behavior on the part of the banks.

Fourth, the increasing number of financial institutions has also undermined the PBC's credit control and has indirectly strengthened the local ability to create credit. A main source of funds at the TICs is government deposits;<sup>21</sup> thus an increase in the TICs' funds amounts to a drawing down of the assets of the specialized banks. Because the specialized banks are responsible for implementing industrial policies, the PBC often creates special facilities to help solve liquidity problems, thus injecting additional credits into circulation.<sup>22</sup>

### 3. THE INSTITUTIONAL ISSUES

In this section, I first review the history of the institutional issues involved in central-local relations. These concern, for example, procedures and regulations to appoint and supervise provincial officials. I then present some evidence to show that central *political* control—defined in terms of personnel control—has been strengthened during the reform period.

#### (a) History

The Chinese Communist Party (CCP) dominates the cadre appointment and promotion, as evidenced by the fact that the main agency in charge of cadre management is the Department of Organization (DOO) under the Central Committee of the CCP.<sup>23</sup> Since 1983, there have been two important developments. One is that some administrative decentralization occurred; the other is that along with this administrative decentralization there has been a comprehensive effort to develop alternative and less direct means to regulate and supervise provincial-level appointments.<sup>24</sup>

Selecting, assigning, and promoting top provincial cadres in the Chinese bureaucratic hierarchy remain the supreme and unquestioned authority of the center; decentralization concerns the management of only bureau level officials,<sup>25</sup> i.e., whether they should be managed by the central DOO or by the provincial party authorities. Top provincial-level officials, such as party secretaries, governors, and vice-governors, have always been centrally managed.

In 1980 the DOO laid down the so-called 'two-level downward' management system, under which the central Party authorities were responsible for cadre management at the next two lower levels. Thus, for local government posts, the Central Committee was in charge of provincial and prefectural officials (Department of Organization, 1984). In 1983, in a drive to streamline government, the two-level downward system was changed to the so-called 'one-level downward' management system, i.e., cadres were managed by officials immediately above them (Department of Organization, 1986). Under this system, the DOO only managed top provincial officials and the management of bureau-level officials was the responsibility of the provincial Party committees. As a result of this change, the central DOO was, as of 1983, directly responsible for the appointment and removal of 7,000 cadres, a reduction of some 6,000 from the previous system (Department of Organization, 1986 p. 432).

The shortcoming of the two-level downward system was excessive centralization and unwieldiness; the problem with the one-level system was that it encouraged nepotism and localism because it concentrated too many appointment decisions locally (Mansion, 1985). To deal with these problems, the central government has developed a number of procedures and institutions to curb localism while delegating some local administrative autonomy. These efforts have centred on the development of rules regulating those appointment decisions that are made locally and establishing or strengthening institutions to better monitor the performance of local officials.

The appointment rules involve a number of requirements that each appointment decision must satisfy. These include, for example, a quorum rule that

requires two-thirds of the members of the Party committee be present when discussing a nominee; detailed instructions as to when and what kind of information about a nominee should be reported to the central DOO; specifications of situations in which prior approval from the central DOO is required, etc. In addition, the central DOO retains appointment power over the heads of functionally important bureaus, such as the local DOO and local personnel bureaus; the central DOO also has veto power of any bureau-level appointment decisions. Most of these procedures were implemented after 1985 and typically they went through revisions and refinements.<sup>26</sup>

During the Maoist era, as indicated by the high degree of centralization, emphasis was on the appointment process. Since the late 1970s, the reformist leaders have begun to stress the importance of monitoring on-job performance and have begun to develop specialized institutions to perform this task. An example is the Ministry of Supervision (MOS), which was abolished in 1959 and was restored in 1987. Its main task is to detect and discipline those officials engaging in illicit conduct (Dai and Cai, 1989, pp. 65–66). Another example is the General Auditing Administration (GAA), which was established in 1983 to audit investment and fiscal affairs of government agencies and firms.

A common problem however, afflicts both the MOS and GAA in performing effective monitoring: They lack sufficient independence from those government units they are assigned to monitor. The local bureaus of the MOS are subject to “dual leadership” by the MOS and the corresponding provincial government. The central MOS sets forth guidelines for local operations but it does not have authority over local personnel, although changes in the top leadership of the local bureaus do require prior clearance from the MOS. The MOS also has resident inspectors in other government units but their administrative expenditures are borne by the units they are sent to monitor (State Commission of Government Establishment, 1989). The local bureaus of the GAA are also subject to dual leadership and local GAA payrolls are on the local budgets. But, in a measure to enhance their independence, they are placed directly under the leadership of the provincial governors (Wang, 1990; Li, 1990).<sup>27</sup> Similar to the MOS, the GAA inspectors resident in other government units are on the administrative payroll of their resident units (State Commission on Nomenclature of Government Agencies, 1989).

The Chinese leadership has recognized the inherent conflicts of interests built into the system. There has been some effort to separate monitoring from administrative command. The use of provincial general offices under the provincial party committee and government is an example.<sup>28</sup> Because it is a comprehensive unit and is not allied with any departmental interests, it is expected to be relatively free of bias. For this reason,

since 1990 the central policy makers have instructed the provincial general offices to collect information independently of other local government departments (Xu, 1991).

(b) *Central administrative control: Some evidence*<sup>29</sup>

*A priori*, there is no reason that central administrative control is more effective when the center makes many appointment decisions as opposed to controlling the appointment rules. Here I will show that central administrative control over the provinces has in fact increased. The evidence concerns the regularity of personnel changes, the administrative uniformity across provinces, and the tenure characteristics. Because of the inherent complexities of the issue, much of this type of evidence is indirect and the conclusion about enhanced central control is thus inferred rather than directly demonstrated.

(i) *Cyclicity*:

The regularity of personnel changes is shown in the cyclicity of the patterns. The regular personnel changes, at fixed intervals, are an indication that the provincial personnel changes are a more institutionalized process rather than, as was the case during the Maoist era, a function of the ebbs and flows of political campaigns and personal whims.

Figure 4 shows the percentage of top and secondary provincial officials added or removed during 1976–92. Two characteristics are noteworthy. One is that the movements of the curves are highly cyclical. There seems to be a cycle of two to three years in duration, i.e., the peak years, 1978, 1980, 1983, 1985, 1988, and 1990, were either two or three years apart from each other. This is *prima facie* evidence that provincial personnel adjustments have been a regular feature of China’s nomenclatural system. The second characteristic is the gradual decline, over time, in the magnitudes of the personnel changes since 1983. In 1978 and 1983, 55% and almost 80% were removed in 1978 and 1983, respectively but since 1983, the magnitudes of changes have been reduced drastically, an indication that personnel changes have become more incremental and more routine.

(ii) *Administrative uniformity*:

Some scholars have argued that during the reform era administrative localism has become more entrenched in China (Li and Bachman, 1989; Zang, 1991). This view is not supported by the data on provincial personnel. Central control — and therefore the attenuation of localism — is first measured in terms of administrative uniformity. All else being equal, the more uniform the Chinese provinces have become, the more centralized is the administrative control.



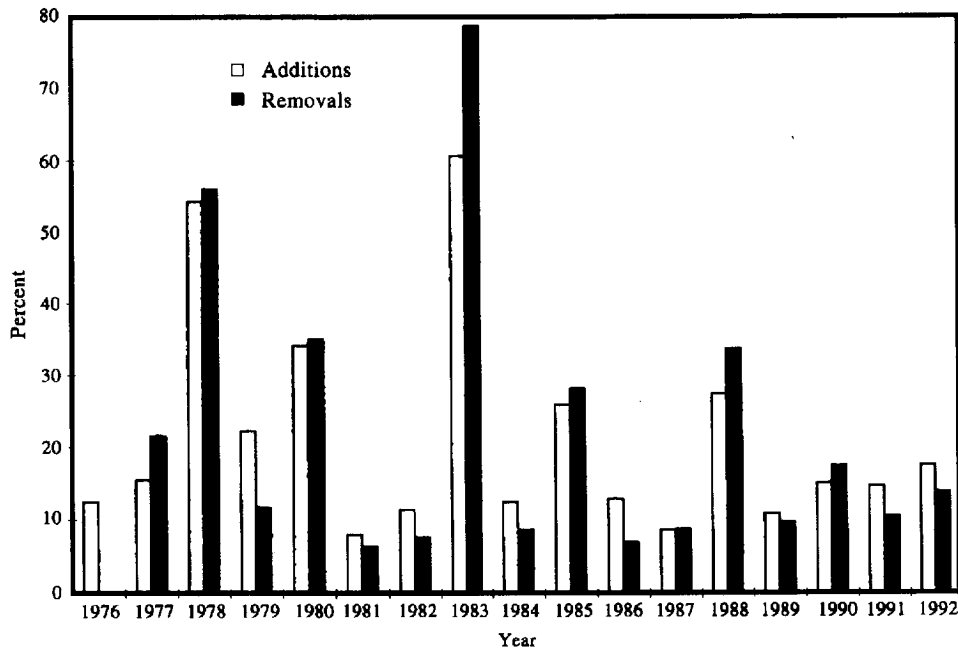


Figure 4. Additions and removals of provincial officials. Source: Database.

The uniformity index — standard deviations — is applied to tenure length and the number of positions in local government and party establishments. Uniformity increases if the standard deviations of these values decrease; in particular, I take 1983 as the watershed year because of the personnel changes effected in that year and because of the personnel reforms introduced since 1983. Administrative uniformity is an indication of central control, because it is likely that it does not occur by accident but rather by design and by supraprovincial coordination. Table 3 shows the stan-

dard deviation values for the number of "slots" in the provincial party and government units and for the average tenure of officials. Both of these are centrally defined and enforced.

With only one exception — the tenure of deputy party secretaries — all indicators show that administrative characteristics have become more uniform across provinces since 1983 as compared with the period preceding 1983. For example, the average difference in terms of the number of positions in the local party establishment was 4.71 before 1983; after 1983, the value was cut by more than one half, to 2.02. A similar decline took place in the number of local government positions, from 3.36 to 1.17. This finding suggests that since 1983 the structure of provincial party and government institutions has become more similar despite the inherent heterogeneity among Chinese provinces and despite the increased economic autonomy accorded to the provinces during the reform era. Similarly, the decline in cross-sectional differences in tenure length suggests that factors affecting tenure duration have become more systemwide and less idiosyncratic to particular provinces.

(iii) *Tenure length:*

Entrenched localism is associated with long tenures of local officials; conversely, shorter tenures are *prima facie* evidence that localism has abated. The legally specified term of office for governors is five years; in reality, the term of office does not even approach that

Table 3. Standard deviation values of local party and government positions and of tenure length before and after 1983

	Pre-1983 period	Post-1983 period
<i>Positions</i>		
Party	4.71	2.02
Government	3.36	1.17
<i>Tenure</i>		
Party secretaries	2.35	2.20
Governors	2.70	2.10
Deputy secretaries	1.21	1.34
Vice governors	1.49	1.40

Source: Database.

number. Only governors from three provinces, Beijing, Guizhou, and Inner Mongolia, approached five years; all other provinces fell far short. The average tenure length is slightly below four years. On average, since 1979, the tenure length for party secretaries was only 3.44 years; for governors, it was even shorter, around 2.85 years. Secondary officials have slightly longer tenures; party officials, on average, stayed in their offices for about 4.04 years; government officials, for about 3.73 years.<sup>30</sup>

Since 1983 the changes in tenure length have not been in one direction. For top provincial officials, the average tenure length increased; for secondary officials, there was no uniform trend. Before 1983, the average tenure for party secretaries was 3.34 years; after 1983, it was 3.52 years; for governors, it was three years before 1983, but it was 3.12 years after 1983. The average tenure length for secondary party officials declined from 4.24 years before 1983 to 3.95 years after 1983; for secondary government officials, it rose from 3.74 years to 3.89 years. Both the small magnitude of these changes and the lack of a uniform direction suggest that over time changes in tenure length have not been significant and, to the extent that administrative localism is associated with the prolonging of local tenure, we cannot conclude that administrative localism increased after 1983. This is especially true when considering the fact that provincial personnel went through several rounds of large-scale adjustments in a few years after the Cultural Revolution; for that reason there are some *a priori* reasons to believe that the somewhat short tenure durations before 1983 were a result of rather extraordinary personnel adjustments associated with the central leaders' political objectives at the time.

#### (iv) *Tenure correlations:*

It is hypothesized that overlapping tenures between party and government officials fosters administrative localism. This can occur in several ways. The network of connections becomes more entrenched when people work together and interact among each other for a long period of time. Patronage, for example, tends to be stronger among people who are close for a long period of time compared with people who interact over a shorter period of time; as joint tenures lengthen, local officials may come to share more common interests.

The structure of our data on provincial personnel allows us to analyze systematic correlations between the tenure length of government officials and that of party officials. Positive correlations indicate that tenure durations for government and party officials tend to be similar and that their services tend to overlap with each other. Negative correlations imply that tenure durations for government and party officials are different from each other, i.e., long tenures of one are associate with short tenures of another or vice versa.

The evidence for localism thus concerns both the direction and the strength of the correlations between the tenure of party and government officials. Administrative localism is less severe when the correlations are negative because government and party officials overlap with each other to a lesser extent; positive correlations, on the other hand, are *prima facie* evidence for localism. Changes in localism are assessed by examining changes in the strength of the correlations: Localism becomes weaker if correlations decline in amplitude; otherwise localism has increased.

To determine whether administrative localism has increased or declined, I construct a simple statistical model with the tenure of government officials as the dependent variable ( $Tenure_{(g)}$ ). Our model hypothesizes that the tenure of government officials is presumed to be related to the tenure of party officials in the same province. To test if there were changes in localism, I create a dummy variable for the post-1983 period ( $Period_{(83)}$ ) and I allow the tenure coefficient for party officials to vary with it. A time variable is included to represent any effect arising from the time trend. Table 4 presents the results from the regression analysis from our model.<sup>31</sup>

Because our *a priori* hypothesis is unable to tell us which way our independent variables are related to the dependent variable, a two-tail significance test is applied. All the coefficients are statistically significant and our two models for top and secondary officials explain about 29% and 24% of the variance of the tenure of government officials. Consistent with our knowledge that the late 1970s and early 1980s were associated with large-scale personnel shifts, personnel stability increases with time.<sup>32</sup> The evidence for administrative localism before 1983 is strong. The term,  $Tenure_{(p)}$ , measures the effect of the tenure of party officials on that of government officials before 1983. It is strongly positive; for top officials, the coefficient is 0.64 and for secondary officials, it is 0.47. The coefficient 0.64 means that on average if a party official's tenure increases by one year, the tenure of a government official increases by about eight months (i.e., 64% of one year). Armed with this knowledge, we can calculate the typical amount of time government and party officials overlapped with each other in their respective posts. As noted earlier, the average tenure for a party secretary was 3.34 years before 1983; if a governor and a party secretary assumed office in the same year, a party secretary would work with the same governor for roughly about two out of 3.34 years.

The evidence for the post-1983 period suggests declining localism. The effect of the tenure of party officials on that of government officials for the post-1983 period is given by:  $Tenure_{(p)} + Tenure_{(p)} \times Period_{(83)}$ . This formula yields 0.12 (0.64 - 0.52) for top officials and 0.3 (0.47 - 0.17) for secondary officials. Thus the strength of the correlations between the

Table 4. *Regression of tenure of government officials\**

Dependent variable: Tenure <sub>(g)</sub> †	Top officials	Secondary officials
Intercept	-1.16* (0.376)	0.53* (0.287)
Time§	0.30* (0.035)	0.17* (0.031)
Tenure <sub>(p)</sub> ¶	0.64* (0.052)	0.47* (0.048)
Tenure <sub>(p)</sub> x Period <sub>(83)</sub>	-0.52* (0.061)	-0.17* (0.058)
Adj. R <sup>2</sup>	0.29	0.24
N. of obser.	464	464
D-W statistic	1.54	2.02

Source: Database.

\* Standard errors are in parentheses. Significance tests are two-tailed.

† Tenure<sub>(g)</sub>: Tenure of government officials measured in years.

\*  $p < 0.1$ .

§ Time: A trend variable where 1976 is one, 1977 is two, 1978 is three, etc.

¶ Tenure<sub>(p)</sub>: Tenure of party officials measured in years.

|| Period<sub>(83)</sub>: A period dummy where 1976–82 is coded 0 and 1983–92 is coded one.

tenure of party officials and that of government officials has declined drastically during the post-1983 period. An increase of one year for a party secretary would only increase the tenure of a governor by about 1.44 months instead of the eight months before 1983. An increase of tenure for a secondary party official by one year is associated with an increase of that for a secondary government official by four months, instead of the six months before 1983. If the hypothesis about the connections between joint tenures and patronage is correct, the fact that government and party tenure durations have become more asymmetrical is evidence for declining localism and, by inference, for greater central control.

#### (v) *Governance types:*

One long-standing practice in the Chinese bureaucracy to curb administrative localism is to rotate officials across provinces (known as the cadre rotation system in Chinese nomenclature). Rotated officials are made to work with officials and in environments outside their native areas to curb developing networks of connections. Since the late 1970s, central party authorities have stepped up the use of this practice; not only is it applied to intraprovincial rotations but also to interprovincial rotations (Ministry of Personnel, 1991, pp. 25–31).

To measure the systematic effect of cadre rotations, I divide the party secretaries and governors into two groups: Those who climbed to their current provincial positions from an inside track and those who came from an outside track. Inside track refers to positions within the provinces; outside track refers to positions in other provinces or in central ministries. Figure 5 presents the distribution of insiders and outsiders over the years and is based on composite scores given to each province.<sup>33</sup> The white bar represents the number of provinces with insider tracks and the black bar represents those with outsider tracks with a total number of provinces at 29.<sup>34</sup> Two patterns are apparent. One is that before 1985 the number of provinces with insider tracks hovered at a relatively low level between seven (1980) and 12 (1976); since 1985, there is a clear and continuous declining trend, from a high of 14 in 1985 to seven in 1992. As consistent with other administrative developments, administrative centralization began around the mid-1980s after a major push for economic reforms (1984) and for administrative reforms (1983).

#### 4. DISCUSSION

Much of the current scholarship only focuses on the economic dimension of central–local relations and often draws the simplistic conclusion that the central economic control decline represents an overall decline in the power of the central government. As I show here, the economic decentralization has been accompanied by a modest increase in the administrative capabilities of the central government and the overall economic conduct of local officials should be understood in the context of these two cross-cutting forces.

There are two ways that the institutional dimensions of central–local relations may have an impact on local economic behavior. One is that the centralized appointment and promotion procedures have an effect on the incentive structures of provincial officials. The other is that the unitary nature of the political system, to some extent, compensates for the weak economic control the center exercises over the provinces. Some examples from the tax system, investment and inflation controls are used to illustrate these two points.

The incentive structures of provincial officials are a function of the institutional relations between center and the provinces. More frequent personnel changes and shorter tenures tend to make local officials pursue an “objective function” closer to that of the central government. Because of the centralized appointment and promotion procedures, willingness to comply with the center plays a key role in the selection process. Longer tenure promotes localism because as years of service in one province increase, the leaders may identify themselves with or be captured by local interests.

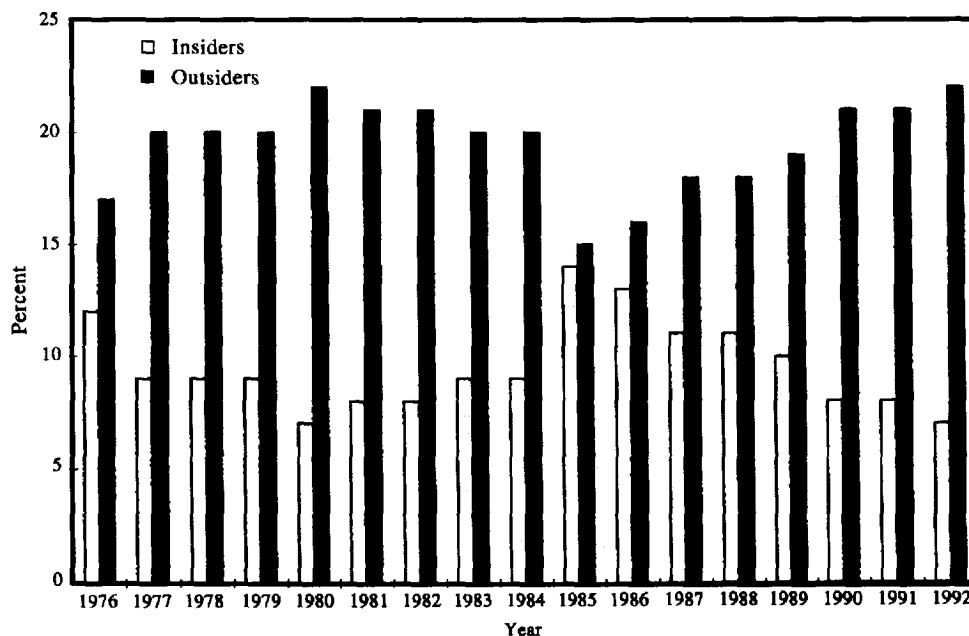


Figure 5. Distributions of insiders and outsiders. Source: Database.

An alternative reasoning argues that frequent appointments improve information distribution for the central government. When specific information about local officials or about their conduct is costly to gather, adjusting the length of personnel tenure is a relatively efficient control method.<sup>35</sup> In separate work, I show that newly appointed local officials, those with shorter tenures and with stronger bureaucratic ties with the central government, tend to curb inflation-prone investments during austerity periods more and pursue investment objectives closer to those of the central government.<sup>36</sup>

As pointed out before, the central revenue share is small relative to the size of China's consolidated revenue. Yet, the central government has been able to assign financing responsibilities to the localities so as to reduce its own expenditure requirements. Largely because of this expenditure delegation, most of the provinces in fact incur significant deficits.<sup>37</sup> The unitary political system also confers on the central government the power simply to appropriate local revenues when there is an urgent need. This appropriation power leads to a large discrepancy between the provinces' formal and informal tax contributions.

Under the formal system — i.e., the tax turnover quotas stipulated under the tax contracts — tax contributions vary greatly across provinces, when measured in terms of tax contributions to the center as percentage shares of the provincial net material product (NMP). For example, in Table 5 under column A, provincial tax contributions to the center vary widely,

from a high of 7.55% (Liaoning) to a low of 0.20% (Inner Mongolia). Rather remarkably, Guangdong's tax contribution, at 1.72% is lower than that of Anhui (2.02%). But the effective tax contributions — the sum of the formal and informal contributions — present an entirely different picture. For Guangdong, the effective tax contributions are defined as tax contributions plus the unserviced central borrowings: for other provinces, the effective tax contributions are the tax contributions minus the central subsidies.<sup>38</sup> For rich provinces, the large discrepancy in the *ex ante* contribution rates has disappeared. Liaoning's tax contribution is about four times that of Guangdong under the formal system; the difference narrows to around 12% under the effective system.<sup>39</sup> Effective contributions from poor provinces are negative because they receive more central subsidies than they contribute to the central coffers.<sup>40</sup>

Because of the unitary nature of its political system, arguably, it is more appropriate to evaluate China's tax system in terms of consolidated revenues rather than in terms of central revenues. The center has firmer control of an administrative nature, as compared with central governments in other countries, and it relies on these administrative means to achieve economic objectives. But these administrative instruments would be less effective in shaping local economic conduct when local tax departments possessed less revenue. General revenue losses, in a sense, would devalue the administrative resources available to the central government.

Table 5. *Provincial tax contributions as shares of provincial NMP, 1988\**

	(A) Formal contributions (%)	(B) Effective contributions (%)
Guangdong	1.72	3.72
Jiangsu	6.43	3.68
Liaoning	7.55	4.15
Inner Mongolia	0.20	-14.40
Anhui	2.02	-1.42

Sources: Guangdong's tax figures are from Maruya (1992); figures for all other provinces are from Ma Hong and Fang (1991); provincial NMP figures are from SSB (1990).

\* Formal tax contributions refer to revenues the provinces turn over to the Center under the central/provincial tax sharing arrangements; effective contributions refer to tax payments minus central subsidies or, in the case of Guangdong, tax payment plus unserviced central borrowings.

Appropriate fiscal divisions between national and local levels of government are a core concern in the decentralization literature. Economic and political analyses of federalism typically differ in their definitions of federalism. Political scientists tend to be legalistically oriented and define federalism as a system in which divisions of responsibilities and power are specified constitutionally. Economists define federalism in terms of the administrative levels at which allocative decisions are made. In one of the most influential economic studies of federalism, Oates (1972), p. 17) stresses this distinction between the political and economic definitions of federalism:

In contrast to the conception of federalism in political science, it makes little difference to the economist whether or not decision-making at a particular level of government is based on delegated or constitutionally guaranteed

authority. What matters is simply that decisions regarding levels of provision of specified public services for a particular jurisdiction (be they made by appointed or elected officials, or directly by the people themselves through some form of voting mechanism) reflect to a substantial extent the interests of the constituency of that jurisdiction.

Such a conception requires a heroic assumption that allocative decisions made by elected officials do not differ from those made by officials appointed from above. Two policy implications can be drawn from the aforementioned functions performed by the political institutions — delegation of fiscal responsibilities and reconciliation of policy preferences. One is that the smaller share of tax revenue belies the true authority of the central government, which calls into the question a prevailing view that the Chinese fiscal system is excessively decentralized. Since 1994, as a part of its fiscal reform efforts, the Chinese government has sought to increase governmental revenue in general and the central share of governmental revenue specifically. The recent fiscal recentralization — supported by the World Bank — will attenuate an informal check and balance mechanism whereby the political discretion of the center is constrained by the fiscal control of the localities. Responsible policy advice should take into account the overall context of political centralization in China and the fact that those political and economic events with calamitous consequences — such as the Great Leap Forward and the Cultural Revolution — were all initiated by the central government.<sup>41</sup>

The other implication is that the small central share of tax revenue understates the capacity of the Chinese central government to supply inflation control. Table 6 illustrates an apparent asymmetry between the fiscal position of the central government and inflation performance in China as compared with other developing countries: China's inflation rate is lower or comparable to other developing countries despite the fact that the Chinese central government possesses about half of the fiscal resources as compared with other central

Table 6. *Central governments' fiscal positions and inflation: China in comparative perspectives (%)\**

Country	Central expenditure	Central revenue	Inflation
China	10.2 (1990-91)†	6.1 (1990-91)†	12.9 (1988-93) 5.3 (1974-93)
Developing countries	26.4 (1985)	22.7 (1985)	51.0 (1983-87)
-Low-income countries‡	20.8 (1985)	15.4 (1985)	13.0 (1983-87)

Sources: For China, expenditure and revenue figures are from IMF (1994, pp. 90, 92); inflation figures are calculated from World Bank (1995, pp. 208-209). For developing countries, expenditure and revenue figures are from World Bank (1988, p. 46); inflation figures are from World Bank (1989a: 63).

\* Except for China, the expenditure and revenue figures are shares of GNP. Inflation is measured by the growth rate of GDP deflators. Relevant years are in brackets. All the figures refer to annual averages.

† Shares of GDP.

‡ Excluding China and India.

governments. There are many differences between China and other developing countries that could explain this difference in macroeconomic performance but one of the most important ones may have to do with the nature of political institutions.

China's political institutions are one reason why inflation in China has remained modest as compared with other reforming CPEs. The central issue is the relationship between economic control and the nature of political institutions. In China, the political rules of the game remain stable despite rapid changes in the economy. In other reforming CPEs, both political and

economic rules of the game are being changed simultaneously. During the transition period, when the traditional central planning apparatus is being abandoned and before market discipline is fully established, political control is a short-term "surrogate" for macroeconomic policy levers. This function of the political institutions is especially important when firms themselves have weak internal financial constraints and when fiscal and macroeconomic policies are still quite passive, as usually is the case during the transition period.

## NOTES

1. In this article, the term locality applies to provinces, prefectures, and counties in the Chinese administrative system. Whenever necessary, I use province to distinguish from the other levels of local government.
2. For some of these views, see Wong (1985) and Boisot and Child (1988).
3. Two US-educated academics, Wang Shaoguang and Hu Angang, argue that the power of the central government in China today is comparable to that of the Yugoslav central government on the eve of its breakup (Wang and Hu, 1993).
4. Very often, as I will show later, the chains of command are overlapping among different levels of the economic authorities, depending on the issue areas; this can make it difficult for analysts as well as for enterprise managers themselves to know who their real bosses are.
5. For example, in Sichuan province, among the 65 enterprises the Center delegated to provincial management in 1970, wage and financial management, product allocation, and production planning were in fact distributed among central ministries, the provincial government, and the city authorities. See Tang (1983, pp. 62–63).
6. Soviet enterprises were divided into three types. All-union enterprises were managed by the central government; union-republican enterprises were jointly managed; the local sector consisted of republican enterprises. See IMF (1991, p. 200).
7. The clearest indication of this is the drastic reduction in the number of products under central allocation during 1982–85, from 256 to 23.
8. In fact, if one is to use the official definition for *difang touzi* (local investment), i.e., the portion of investment activities that fall under the administrative supervision of the local governments, then the peak of local control was in 1958 when the localities administered 63.8% of state-owned capital construction.
9. There is slippage in control however, because local governments and their enterprises evade the constraints imposed by the approval system, such as breaking a large project into separate components so that the project is subject to local review and approval.
10. For a fuller account of fiscal developments in the 1980s, see the World Bank (1989a).
11. The central bank financing is calculated as the difference between consolidated revenue and consolidated expenditure according to the *Chinese definition* of budget.
12. Thus it is at least arguable that the existence of a quasi-budgetary revenue source in part obviates the need for a higher tax rate. A World Bank calculation shows, using data from the mid-1980s, that the quasi-budgetary revenues were equivalent to an increase in the enterprise income tax burden from about 49% to 67% (World Bank, 1989a, p. 24).
13. There are also reasons to believe that the structure of the Chinese budget enables the Chinese tax system to carry out macroeconomic management more than its level would suggest, as compared with the tax systems in developed countries. In most of the developed countries, the fastest growing component of the budget has been transfer payments.
14. Chinese sources on central–local budgetary breakdowns are incomplete. The central and local revenues are reconstructed by relying on the following simple assumptions. First, all the domestic debts are incurred by the central government; the breakdowns of external loans are given in SSB (1992). Second, the clearly governmental portion of the consolidated extrabudgetary revenue also holds for central and local extrabudgetary revenues as well.
15. The evidence is rather sketchy; for example, during 1979–84, Yunnan and Hunan, two provinces producing tobacco, rose by three percentage points in terms of their national shares of cigarette production, while two traditional cigarette-producing provinces, Shanghai and Shandong, declined by three and 2.4 percentage points, respectively (World Bank, 1990a, p. 209).
16. In general economists consider the regional convergence of industrial structures as wasteful in that regions do not develop along the lines of comparative advantage because the industries that are promoted lack economy of scale. More innovative economic thinking however, has begun to view industrial convergence in a more advantageous light; specifically, industrial convergence promotes interregional competition. For the former view, see Shen and Dai (1990); for a sample of the latter view, see Qian and Xu (1993).

17. For a summary discussion of the characteristics of the Chinese banking system before the reforms, see Bowles and White (1993); for more details, see Byrd (1983) and De Wulf and Goldsbrogh (1986).
18. The above discussion is based on Bowles and White (1993), World Bank (1990b), Zhou and Zhu (1998).
19. Agricultural procurements and the construction of key investment projects in energy and raw materials are examples.
20. In 1988, the PCBC exceeded its credit plan for working capital by 81% while, arguing that it was short of funds, it failed to fulfill its credit plan for transport vehicle procurement as mandated by the state plan (Tang, 1992).
21. For example, in 1988 the Beijing branch of the ICB lost one billion yuan in deposits to the TICs run by the central ministries.
22. For this line of analysis, see Tang (1992). In recent years, many TICs have used their funds to engage in speculative activities on the stock and real estate markets and often cannot fully recoup the value once they are required to recall these investments. In part this is because austerity policies tend to depress the value of speculative investments. This was the problem with Zhu Rongji's brief austerity program between July 1993 and December 1993. Less than one-third of the speculative investments reportedly were recalled.
23. "Cadre" is an encompassing term, covering government officials or civil servants (such as heads of government bureaus) as well as technical personnel (such as college professors or factory technicians). Here, I use the term more narrowly to refer to *dangzheng ganbu* (party and state officials).
24. For a more in-depth discussion of these two developments, see Huang (1995a).
25. Bureau-level officials are one-tier lower than ministerial and provincial officials (who have equivalent ranks in the Chinese bureaucratic system). For example, the head of the tax bureau in Guangdong is a bureau level official.
26. For more details, see Huang (1995a).
27. At the time the GAA was founded, there were proposals to establish a GAA with vertical leadership relations to its local bureaus. In 1990 similar proposals surfaced again. But the idea was never accepted by policy makers who argued that it was simply unrealistic for the local auditing bureaus to perform its duties without active policy and logistic support from local Party committees and governments.
28. The provincial general offices receive directives from the general offices of the Politburo and the State Council, control access to top provincial leaders, draft documents on their behalf, issue directives, and coordinate interdepartmental activities. See Ministry of Personnel (1989, pp. 5 and 15).
29. Bureaucratic data used for analysis here come from the following sources. For the top officials, the party secretaries and governors, their dates of appointment are recorded in Ma and Wenbing (1989) and in various issues *China Directory*; for information on lower level provincial officials, I have used *Zhonggong nianbao* [Yearbook on Chinese Communism] (1977-93), compiled by the Institute for the Study of Chinese Communist Problems in Taipei, Taiwan. Background data on the provincial officials are found in Bartke (1981, 1987 and 1990). Supplemental information on the Chinese leadership is found in *Who's Who in China: Current Leaders* (1989) published by the Foreign Languages Press in Beijing and Liu and Shen (1992).
30. Compared with their Soviet counterparts, Chinese top provincial officials retain their posts much less enduringly. The average tenure for first party secretaries of the Soviet republics during 1955-70 was 7.59 years; for lower level officials, however, the tenure was shorter, around four years (Bunce, 1981, p. 149).
31. In interpreting these results, we should refrain from attributing casual relationships to the variables included in the model. Regression analysis itself cannot establish causality; causality is established by theory or prior studies. Here I do not argue that the tenure of government officials depends on the tenure of party officials. My sole purpose here is to determine if administrative localism has increased or declined; as such I am only interested in analyzing the direction and the strength of the relationships between different tenure variables. Another way of making the same point is that our dependent and independent variables are perfectly interchangeable, i.e., it makes as much sense to treat tenure of government officials as the dependent variable as it does to treat tenure of party officials as the dependent variable.
32. The time variable has a coefficient of 0.30 for top officials and 0.17 for secondary officials. This means that as time increases by one year, the tenure of government officials increases by about three months (30% of one year) for top officials and by about two months (i.e., 17% of one year) for secondary officials.
33. Specifically, a provincial official is given a score of one if he/she is from an inside track and two if he/she is from an outside track. The composite scores are derived by averaging the scores of party secretaries and governors. Provinces with a score less than or equal to one are insiders; otherwise they are outsiders. For details on the coding scheme, see Huang (1996).
34. There are altogether 30 provinces in China but this article only includes data for 29 of them. The 30th province, Hainan, was created in 1988 and its data are not complete.
35. Kaufman (1960, pp. 155-156), in his study of the management of the American forest service, argues that personnel turnovers check policy deviations because no matter how successfully a ranger may hide his performance from his superiors, he cannot do so with his successor. There are in fact many similarities between a US forest ranger and a Chinese local official. Both have a high degree of autonomy and operate quite independently; in addition they both must also reckon with powerful local interests which, from time to time, pull them in a direction inconsistent with that of their respective superiors. Kaufman argues that there should be considerable centrifugal forces that fragment the forest

service and the fact that it is not fragmented shows the success of the design of the management system.

36. See Huang (1996).

37. See Wong (1990)

38. During the reform era, the Center has not only "borrowed" from Guangdong to cover its budget shortfalls; in 1981 it borrowed 154 million yuan from Fujian (Tong, 1989, p. 19) and in 1987, it borrowed 236 million yuan from Tianjin (*Tianjin jingji nianjian* 1988, 1989, p. 515). In 1988, the central government returned a portion of this money to Tianjin by excluding 13 small taxes from being counted as local revenue and by excluding loans as an expenditure item, as is customary in the Chinese tax system. In this case, the money appropriated by the Center equals the difference between Tianjin's loans and the value of these 13 taxes. See *Tianjin jingji nianjian* 1989 (1989, pp. 539–540). Usually, the Center does not appropriate this money in an outright manner; instead, it appropriates a significant portion by reducing local retention and the collection base simultaneously.

39. This calculation may bias downward tax contributions from Jiangsu and Liaoning because we do not have data on central borrowings from these two provinces. It is likely that central subsidies to Guangdong are small.

40. Since the measurement used here already normalizes the differences in economic development, that poor provinces have both lower tax contribution ratios and receive substantial subsidies might be due to the central government's pricing policies. According to the World Bank, Chinese energy and raw material prices are set low relative to their economic costs. The price of heavy fuel oil is one-third that of international levels and coal is set at 60% of its long-run marginal production costs (World Bank, 1985, p. 71). Administrative pricing affects the levels of tax revenues from different provinces. Provinces with a large energy sector — many of which are located in the interior regions — have a lower level of tax revenue because their tax revenue is artificially depressed since their main products are set below their market values.

41. Elsewhere I deal with the harmful effect of fiscal centralization in more detail. See Huang (1995b).

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